## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 7 July 2005 (07.07.2005)

**PCT** 

## (10) International Publication Number WO 2005/062368 A1

(51) International Patent Classification<sup>7</sup>: C08L 83/04, 83/08, H01L 23/29

H01L 21/56,

(21) International Application Number:

PCT/JP2004/018548

(22) International Filing Date: 7 December 2004 (07.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2003-424821

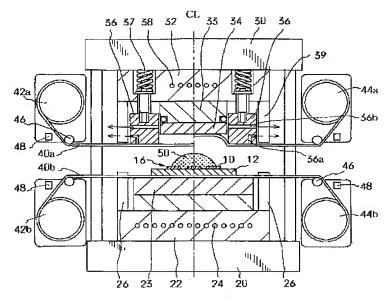
22 December 2003 (22.12.2003) J1

- (71) Applicant (for all designated States except US): DOW CORNING TORAY SILICONE CO., LTD. [JP/JP]; 1-3, Marunouchi 1-chome, Chiyoda-ku, Tokyo, 1000005 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): MORITA, Yoshitsugu [JP/JP]; C/o Dow Corning Toray Silicone Co., Ltd.,

- 2-2, Chigusakaigan, Ichihara-shi, Chiba, 2990108 (JP). MINE, Katsutoshi [JP/JP]; 7-20-2, Aobadai, Ichihara-shi, Chiba, 2990117 (JP). NAKANISHI, Junji [JP/JP]; C/o Dow Corning Toray Silicone Co., Ltd., 2-2, Chigusakaigan, Ichihara-shi, Chiba, 2990108 (JP). ENAMI, Hiroji [JP/JP]; C/o Dow Corning Toray Silicone Co., Ltd., 2-2, Chigusakaigan, Ichihara-shi, Chiba, 2990108 (JP).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURING THEREOF



(57) Abstract: A method of manufacturing a semiconductor device sealed in a cured silicone body by placing a semiconductor device into a mold and subjecting a curable silicone composition that fills the spaces between said mold and said semiconductor device to compression molding, wherein the curable silicone composition comprises the following components: (A) an organopolysiloxane having at least two alkenyl groups per molecule; (B) an organopolysiloxane having at least two silicon-bonded hydrogen atoms per molecule; (C) a platinum-type catalyst; and (D) a filler, wherein either at least one of components (A) and (B) contains a T-unit siloxane and/or Q-unit siloxane. By the utilization this method, a sealed semiconductor device is free of voids in the sealing material, and a thickness of the cured silicone body can be controlled.



## WO 2005/062368 A1



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.